

WHAT IS CLAIMED IS:

1. A method of switching context on a processor, the method comprising:  
 saving the context under software control using an inconsequential register as temporary storage; and  
 preventing the processor from changing the context while the context is being saved.

2. The method of claim 1, wherein the inconsequential register is used as a temporary storage in lieu of a privileged register.

3. The method of claim 1, wherein the context is saved at a predetermined interruption point.

4. The method of claim 1, wherein the context is switched between a host operating system and a virtual machine application, the virtual machine application controlling the context switch.

5. The method of claim 4, wherein the inconsequential register is used to pass information to the virtual machine application

6. The method of claim 1, wherein the context is switched using an IA-64 processor.

7. The method of claim 6, wherein the inconsequential registers include at least one caller-save register.

8. The method of claim 6, wherein the inconsequential registers include at least one branch register.

9. The method of claim 1, further comprising restoring the context using the inconsequential register as temporary storage.

10. The method of claim 9, wherein the context is restored by using a branch register to perform an indirect branch.

11. A method of switching context between a host OS and a virtual machine on a processor, the processor having privileged registers, the method comprising:

giving the virtual machine access to the privileged registers;

using at least one privileged register as temporary storage to save the context at a predetermined interruption; and

preventing the processor from changing the context while the context is being saved;

the virtual machine application controlling the context switch.

12. Apparatus comprising:

a processor including a plurality of registers; and

a virtual machine application for commanding the processor to switch context by saving the context under software control using an inconsequential register of the processor as temporary storage; and preventing the processor from changing the context while the context is being saved.

13. The apparatus of claim 12, wherein the inconsequential register is used as a temporary storage in lieu of a privileged register.

14. The apparatus of claim 12, wherein the context is saved at a predetermined interruption point.

15. The apparatus of claim 12, further comprising a host OS; wherein the context is switched between the host OS and the virtual machine

application; and wherein the virtual machine application controls the context switch.

16. The apparatus of claim 15, wherein the inconsequential register is used to pass information to the virtual machine application

17. The apparatus of claim 12, wherein the processor is an IA-64 processor.

18. The apparatus of claim 17, wherein the inconsequential registers include at least one caller-save register.

19. The apparatus of claim 17, wherein the inconsequential registers include at least one branch register.

20. The apparatus of claim 12, wherein the virtual application further commands the processor to restoring context using the inconsequential register as temporary storage.

21. The apparatus of claim 20, wherein the context is restored by using a branch register to perform an indirect branch.

22. Software comprising instructions for commanding a processor to switch context by saving the context under software control using an inconsequential register of the processor as temporary storage; and preventing the processor from changing the context while the context is being saved.